REMARKS

Claim 24 has been amended to specify that the inventive peptide is part of a mycobacterial protein, specifically, and that the peptide comprises at least 5 aminoacids which are identical with the corresponding amino acids in the same relative position in one of the sequences 81-100 and 241-270 of SEQ ID NO. 1, or the corresponding sequence of another mycobacterial species, with at least 4 consecutive aminoacids of the at least 5 aminoacids being identical with the corresponding mammalian stress protein aminoacids. Claim 24 now strongly resembles previously presented claim 27, which is cancelled herewith. By virtue of this amendment, in part, it is believed that the claims are now sufficiently perfected to establish patentability and proper form over all the asserted rejections of record.

The asserted sections 102, 103 and 112, first paragraph references are set forth in the outstanding Action. All these rejections can be seen, by the following, as in condition for withdrawal either due to the claim amendments submitted herewith, or due to the explanation below why the asserted basis for the rejection (particularly over Wendling et al.) can be seen as incorrect and appropriate for withdrawal.

Regarding the van Eden reference (most recently U.S. Patent No. 5,268,170 ("'170"), and more recently the EP 262,710 counterpart) the Examiner alleges that the only difference between the claims would be the specific length recitation of 7-30 amino acids, versus 4-70 amino acids. This assertion is not correct, however, particular with respect to the amended claims herewith, which make clear that the essential difference between the van Eden peptides and the peptides of the present invention is the amino acid sequence, very concretely. The peptide of van Eden is selected from the sequence 171-240, whereas the current peptides are selected from the sequences 81-100 and 241-270 with even further restrictions as recited in amended claim 24. It is believed to be particularly clear, in view of this Amendment, that van Eden does not and cannot teach the subject matter of the invention as claimed.

Indeed, it is not merely the case that there is no suggestion from van Eden to select peptides other than those from amino acids 171-240, because van Eden is more than silent on this matter. By contrast, from column 4, line 61 to column 5, line 23, van Eden '170 explains that within the sequence of mycobacterial hsp65, referred to therein as Antigen A, it is an epitope in the sequence 171-234 (more specifically 193-234 or 193-208) which is responsible for the stimulation of T-lymphocyte clones A2b and A2c and hence for the

protective effect of the protein and the polypeptide. One of the results leading van Eden '170 to this conclusion is that the peptide 234-540 was shown not to stimulate clones A2b and A2c, whereas all peptides including the sequence 171-234 did. This very clearly teaches away from the two currently claimed sequences, in particular from the sequence 241-270, which is within the peptide 234-540 that was concluded not to react with the two clones. It is also believed that by means of the current claim language, the Examiner's concern regarding the disclosure of 171-175 in van Eden has now been overcome.

Regarding the assertion of nonenablement of routes of administration other than nasal, the asserted ground for this rejection appears to be solely that the non-prior art document, Wendling et al, 2000, describes a failure to provide protection following parenteral administration. It is asserted that such a reading of Wendling et al. is much too strong and thus inappropriate, and that a balanced reading would lead to the conclusion that there is no reason to doubt the efficacy and routes of administration asserted by the applicants. First, the purported failure was in a single experiment, and a single experiment cannot be finally conclusive as to any therapeutic approach. Second, the single example was not a complete failure: on p. 2714, second column, Wendling et al. explain that there was a weak delay of onset of the disease, implying that optimization could well result in a noticeable and medically useful effect. In line therewith, the authors themselves are appropriately prudent in drawing conclusions from this isolated failure on p. 2716, last column: in finding an explanation for the success of the nasal route over the parenteral route, they suggest *i.a.* that the mucosal environment *may* well influence the immune response, possibly implying a role of IL-10 production. This does not exclude other explanations. They conclude (end of 1st par.) that subsequent experiments will be required to clarify the role of IL-10. Thus, a successful route other than the nasal route, such as the parenteral route, is not finally excluded.

Even if the objection as to lack of enablement would have any basis against the previously presented claims, the objection has no bearing on the current claims. Wendling et al. describes the use of hsp70 and peptides derived from this protein. It is noted that hsp70 is antigenically unrelated to hsp65 (referred to as hsp60 by Wendling et al.), to which the amended claims are restricted (see first 4 lines of abstract, and p. 2715, 2nd col., line 3). This is confirmed by comparing the sequence of hsp70 (Figure 1 of Wendling et al.)

with that of hsp65 (present SEQ ID NO. 1). Looking more closely at the relevant peptides, it is clear that they are quite different as shown below (preferred claimed parts underlined):

ITDAVITTPAYFNDA (peptide p. 111 of Wendling et al.)

DDVAGDGTTTATVLAQALVR (81-100 of SEQ ID NO. 1, 84-95 underlined)

AGKPLLIIAEDVEGEALSTLVVNKIRGTFK (241-270 of SEQ ID NO. 1, 256-265 underlined)

Therefore, even if Wendling et al. is indicative of the chances of success of hsp peptides, it is not for hsp65-based peptides. Of course, the Wendling et al. reference is not prior art, but the distinctions made herein explain why Wendling et al. reference does not call into question utility or enablement of the present invention, particularly as now claimed.

CONCLUSION

In view of the amendments hereto and for the above exemplary reasons, it is believed that all of the asserted rejections can be seen as in condition for allowance. Allowance of all of pending claims 24-32 is respectfully requested. If any obstacle remains to prompt allowance, the undersigned would very much appreciate a telephone call to the undersigned at the telephone number listed below.

Respectfully submitted,

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